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Upper Mulberry River Watershed
Barrow, Gwinnett, Hall, and Jackson Counties, Georgia

Final Environmental Statement

Kenneth E. Grant, Administrator
Soil Conservation Service

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Sponsoring Local Organizations

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City of Winder, Georgia 30680

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Town of Braselton, Georgia 30517

Barrow County Commissioners, Winder, Georgia 30680

Jackson County Commissioners, Jefferson, Georgia 30549

Hall County Commissioners, Gainesville, Georgia 30501

Gwinnett County Commissioners, Lawrenceville, Georgia 30245

Department of Transportation, 271 Capitol Avenue, SW.
Atlanta, Georgia 30334

Upper Chattahoochee River Soil and Water Conservation District
Route 2, Dawsonville, Georgia 30534

Oconee River Soil and Water Conservation District
Jefferson, Georgia 30549

Upper Ocmulgee River Soil and Water Conservation District
Route 3, Covington, Georgia 30209

October 1973
Prepared by

U. S. Department of Agriculture
Soil Conservation Service
Washington, D. C. 20250

USDA ENVIRONMENTAL STATEMENT
Upper Mulberry River Watershed, Georgia

Prepared in Accordance With
Sec. 102(2)(C) of P.L. 91-190

Summary Sheet

- I Draft () Final (X)
- II USDA - Soil Conservation Service
- III Administrative
- IV Brief Description of Action: The Upper Mulberry River Watershed is located in Barrow, Gwinnett, Hall and Jackson Counties, Georgia. Project plans include conservation land treatment, seven single purpose floodwater retarding structures, two multiple purpose structures for floodwater retardation and municipal and industrial water storage, approximately 8,750 feet of selective debris removal from stream channels, approximately 85,675 feet of stream bank protection, and 241 acres of road bank stabilization.
- V Summary of Environmental Impact and Adverse Environmental Effects: Some favorable impacts consist of watershed protection, flood prevention, stream bank stabilization, conservation treatment of agricultural and forest land, municipal water storage, increased fishing opportunities, and economic improvement. Adverse effects consist of loss of habitat for deer, squirrel and raccoon due to inundation, decreased habitat values in flood storage pools, inundation of stream segments, temporary damage to game and fish habitat from debris removal and temporary degradation of water quality due to increased turbidity levels during construction and until disturbed streambanks become stabilized.
- VI List of Alternatives Considered: Purchase of flood plain or zoning; conservation land treatment alone; conservation land treatment, floodwater retarding structures, and channel enlargement; conservation land treatment and floodwater retarding structures; and conservation land treatment and channel improvement.
- VII List of federal, state and local agencies from which written comments have been received:
- U.S. Department of the Army
U.S. Department of Commerce
U.S. Department of Health, Education and Welfare
U.S. Department of the Interior
Department of Transportation, U.S. Coast Guard
Environmental Protection Agency
Appalachian Regional Commission
Governor of Georgia
State Clearinghouse (Office of Planning and Budget)
Regional Clearinghouse (Georgia Mountains Area Planning and Development Commission)
Metropolitan Clearinghouse (Atlanta Regional Commission)
- VIII Final environmental statement transmitted to the Council on Environmental Quality on December 27, 1973

Draft environmental statement received by CEQ on October 2, 1972.

USDA - SOIL CONSERVATION SERVICE ENVIRONMENTAL STATEMENT

Type of Statement: Draft () Final (X)

Date: October 1973

Type of Action: Administrative

Title of Statement: The Upper Mulberry River Watershed Project, Barrow, Gwinnett, Hall and Jackson Counties, Georgia

1. Description

Authority for Project:

Federal Assistance through Public Law 566, 83d Congress, 68 Stat. 666 as amended.

Sponsoring Local Organizations:

City of Winder
Town of Braselton
Barrow County Commissioners
Jackson County Commissioners
Hall County Commissioners
Gwinnett County Commissioners
Department of Transportation
Upper Chattahoochee River Soil and Water Conservation District
Oconee River Soil and Water Conservation District
Upper Ocmulgee River Soil and Water Conservation District

Project Measures:

The project proposes accelerated application of conservation land treatment and installation of the following structural measures: Seven single purpose floodwater retarding structures, two multiple purpose structures for floodwater retardation and municipal and industrial water storage, 8,750 feet of selective debris removal from stream channels, 85,675 feet of stream bank stabilization, and 241 acres of road bank stabilization.

Environmental Setting and Water and Related Resource Problems:

The drainage area of the watershed is 61,481 acres. Present land use is approximately 43,011 acres of woodland, 9,960 acres of pasture, 3,868 acres of crop land, 3,142 acres in miscellaneous uses and 1,500 acres idle. There are 2,760 acres in the flood plain with land use as follows: 1,200 acres of woodland, 1,045 acres of pasture and hay land, 409 acres idle and miscellaneous, and 106 acres of crop land.

According to 1970 data, Jackson, Hall and Barrow Counties had a total work force of 40,230, of which approximately 39,320 are employed and 1,120 unemployed. Approximately 1,880 employed persons are in agricultural jobs and 37,260 persons are employed in non-agricultural jobs.

Total income of Barrow, Jackson, and Hall Counties in 1970 was approximately \$255,000,000. Approximately eight percent of this income was from farm earnings and 92 percent from non-farm earnings. Per capita income of Jackson County is \$2,435, Hall - \$2,730, and Barrow - \$2,439 which is approximately 70 percent of the national average. Since Gwinnett County is part of the Atlanta Standard Metropolitan Statistical Area, employment and income data was not available.

Most farm income came from the sales of poultry and poultry products, livestock and dairy products, and general crops. Manufacturing, services and wholesale and retail trade, account for most non-agricultural income. Because of the watershed's proximity to major urban areas which provide employment, the general economy has been expanding, resulting in a 25 percent increase in population from 1960 to 1970.

Land values in the project area are relatively high because of its proximity to major urban areas and highways. Upland land values range from \$250 to \$500 per acre. Flood plain values range from \$300 to \$500 depending on soil capability and water hazard. Urban land in the project area is valued at about \$2,000 per acre and projected future value is about \$4,000 per acre.

The Upper Mulberry River drainage area has experienced an agricultural transition which is typical of most Piedmont watersheds. The land was cleared and cultivated initially around 1825. Increased cultivation using poor conservation practices resulted in accelerated erosion from upland fields. Capacities of the river and its tributaries were greatly reduced due to channel deposition. Flooding and overbank deposition became so frequent that bottomland cultivation was severely reduced and in some cases terminated. Realizing the need to recover the use of this economically important land, the Mulberry River Drainage District was formed. A drainage survey was completed in 1909 to locate needed improvements along the river. In 1912, the improvements were implemented, and approximately 3.5 miles of the river was dipped out and the principal meanders straightened from Thompson's Mill south to a point below the project boundary.

The Little Mulberry River Drainage District was formed in 1917 and by the middle 1920's the river had been dipped out and straightened from a point about 2 miles upstream from the Auburn-Mt. Moriah Church road down to the confluence with the Upper Mulberry River. Several rock shoals acting as grade controls were not disturbed.

By the late 1920's, intensified cultivation of the rolling uplands with unchecked erosion had caused increased channel deposition and had practically negated all drainage district improvements. Flooding frequency was increased and swamping conditions were established at the outlets of sediment clogged side tributaries. Aggrading in the Upper Mulberry River Watershed and its tributaries continued until the early 1950's when reduced cultivation, general land use changes, and conservation land treatment eliminated much of the incoming sediment and allowed the initiation of a slow degradation process in the headwater reaches. Limited degrading continued until 1962 when the construction of Interstate Highway 85 placed economic significance on the tremendous quantity of sand that had been deposited in the river. Several recovery points were established along the Upper Mulberry River and its tributaries within the project boundary.

Sand was dipped out or was pumped out and stockpiled for later disposition. This process is continuing today and has caused channel enlargement and accelerated degradation throughout the Mulberry River Watershed. The Little Mulberry River is still aggrading at several locations in its headwaters but has begun to enlarge at the lower end near the confluence with the main stem.

Although this sand removal has increased channel capacity, flooding on the Upper Mulberry River and its tributaries continues to cause widespread damage to agriculture, roads, bridges, culverts and other fixed improvements. Of the 2,780 acres of flood plain subject to flood damage, sediment deposition is severe on 126 acres and moderate on 307 acres. Outlet ends of small tributary streams and farm drainage outlets are being filled with sediment. Approximately 190 acres of once productive flood plain has become swamped out because of these damages. Much of this swamping occurs on the Little Mulberry River where approximately two miles are presently swamped out below the Auburn-Mt. Moriah Church Road. Beaver and waterfowl activity has been observed in this area.

Flood plain scour is moderate and is confined to approximately 50 acres of flood plain scattered throughout the watershed. Continued flooding will cause these scour channels to increase in size.

The rapid removal of channel bed material by dragline, front loader and pump without any control of amount removed, created conditions for extensive bank instability. The resulting rapid uncontrolled drawdown of the water table near the stream apparently caused bank sloughing. The exposed unvegetated banks were susceptible to erosion. Large trees and stumps became undermined or slumped into the channel. Flow was then diverted by these obstructions with resultant severe bank erosion and land loss. Degradation is now controlled by natural ledges, but the obstructions remain. Approximately 6.1 acres of flood plain land are being lost annually due to stream bank erosion.

Severe erosion is occurring on 241 acres of non-vegetated roadbanks and gullies, on 300 acres of open land and on 82 acres of forest land. Eroding areas consist essentially of gullies eroding faster than natural revegetation can take place and unvegetated borrow pits used during the construction of Interstate Highway 85.

More than 55 percent of the watershed is controlled by owners and operators cooperating with the local Soil and Water Conservation Districts. About 65 percent of planned conservation practices have been installed, including ponds, tree planting, grass and legume plantings, stabilization of critically eroding areas, wildlife food and cover plantings and other conservation measures.

The headwaters of Mulberry River rise in the Brevard schist portion of the Piedmont Province and flow southeasterly. The major portion of the rocks are of probable Pre-Cambrian age generally called the Carolina series, gneisses and schists with some granite and dolerite intrusives of later age. The major rock types are Brevard schist, quartzite, marble, granite gneiss, hornblende gneiss and biotite gneiss.

The regional trend of the local rock is northeast to southwest with the major portion of the dips to the southeast. Rock outcrops are numerous enough to provide some structural control over stream pattern development, which is predominantly dendritic, with some trellis drainage in the upper Brevard schist area of the watershed.

The topography is moderately steep (elev. 1,200 feet) in the upper portion of the watershed and mildly undulating (elev. 800 feet) at the lower end of the project boundary.

Upland soils are mostly Cecil, Madison, Appling, Lloyd and Davidson Associations. These soils are well drained, strongly acid and subject to severe erosion without adequate conservation treatment. Up to 80 percent of the top soil has eroded from some of the watershed. Fortunately, these severely eroded areas produce fair yields of pine timber. Flood plain soils are potentially more valuable for economical production of crops and livestock. These soils consist mostly of Congaree (IIw) with small scattered areas of Wehadkee (IVw). There is little or no erosion hazard to these near level, fertile, moist soils when protected from frequent flooding.

The mean annual rainfall is 53 inches. Mean monthly temperatures range from 43 degrees Fahrenheit during the winter months to 78 degrees Fahrenheit during the summer months. The normal growing and harvest season is from March 15 to November 30.

All principal streams in the watershed are perennial in flow, and the average annual discharge for the Upper Mulberry River is 1.3 csm.

Generally there is sufficient water of acceptable quality for agricultural use in the perennial streams and ponds. Water yields from the watershed are excellent. Ground water supplies are generally adequate for limited use in homes and on farms but are not adequate for municipal and industrial use. Two deep wells are producing only 75 gallons per minute for Braselton. The last deep well drilled in the Braselton-Hoschton area is producing only 15 gallons per minute.

The major pollutant of streams in the watershed is sediment from eroding roadbanks and other critical areas. State Health Department sanitation engineers have completed a study of streams and drainage areas above impoundment sites suitable for storage of municipal water. Water quality was found to be acceptable.

State Game and Fish Department biologists sampled about eight surface acres of stream water on the main stem above Highway 124 and found approximately three pounds-three ounces of sport fish per acre, less than one-half of which were considered catchable size. Principal species of fish now inhabiting the streams are brown bullhead, hornyheads, redbreast, white suckers, bluegill, largemouth bass, madtom, chain pickerel and minnows. Very little stream fishing occurs in the watershed. Ponds which are stocked with bass, bream and catfish provide most fishing in the watershed. Several ponds are managed for high production of fish.

Wildlife resources consist of low populations of rabbit, squirrel, quail, dove, fox, mink, muskrat, and woodcock, and low to moderate numbers of raccoon, beavers and waterfowl. Deer are scattered throughout the watershed and are considered to be moderate in number.

Remnants of an old mill dam (Thompson's Mill) and a covered bridge are located on the Mulberry river just below the road from Liberty Church to Highway 211.

Recreation opportunities within the watershed consist mostly of hunting, pond fishing and general outdoor activities. Lake Lanier, one of the largest reservoirs in the state is located approximately ten miles from the center of the watershed. Lawrenceville, located nearby, has recently received a substantial matching grant from the Bureau of Outdoor Recreation to construct a park around a 17 acre lake. The Gwinnett County Resource and Development Project is also assisting the county and towns in providing other recreational opportunities in reach of all watershed residents.

Principal mineral resources of economic importance, in the watershed are sand and gravel, primarily from the Upper Mulberry River, and stone aggregate, granite gneiss and biotite gneiss, from several locally operated quarries. These materials were used extensively during the construction of Interstate Highway 85, but since it's completion, reduced local markets, and distance to other available markets, has caused the cessation of many local operations.

The forest resource consists of approximately 43,011 acres, all of which is in private ownership. Forest types are pine, 54 percent; pine hardwood, 3 percent; hardwood pine, 23 percent; and hardwood, 20 percent. Stand size distribution shows 7 percent large sawtimber, 46 percent small sawtimber, 30 percent poles and 17 percent seedlings and saplings. About 97 percent of the forest stands are medium to well stocked with trees. Principal tree species are short leaf and loblolly pine, hickory, yellow poplar, dogwood, cherry, persimmon, red oak, white oak, and black gum.

The Georgia Forestry Commission, in cooperation with the U.S. Forest Service, through the various Federal-State Cooperative Programs, is providing forest management assistance for fire prevention and suppression, distribution of planting stock, and forest pest control assistance to landowners in the watershed.

The present hydrologic condition of the forestlands, based on five hydrologic condition classes is: 0 percent, very good; 7 percent, good; 20 percent, fair; 56 percent, poor; and 17 percent, very poor. These poor conditions are caused primarily by overgrazing, overcutting and burning in the past and by cultivation of lands which have not returned to forests. At least 53 percent of the forest land has been under cultivation in the past 60 years.

Frequent flooding on the Upper Mulberry River and its tributaries causes widespread damage to agriculture, roads, bridges, culverts and farm fixed improvements. Essential traffic such as school buses and mail deliveries is often delayed or forced to detour around washed out bridges and culverts. One rain-storm that occurred on August 23, 1969, washed out two bridges and one culvert on three county roads. Floods damage crops, delay planting and harvest and in some instances cause complete loss of crops. In many cases, floods destroy early plantings causing the added expense of preparing seedbeds and applying additional fertilizer, seed and pre-emergent herbicides. Noxious and other weed seeds and disease organisms are deposited in fields by floodwater. There are 2,780 acres subject to flood damage.

Pasture and hay crops are damaged by deposition of fine sediment on the forage thereby rendering it unfit for consumption by livestock until the sediment is washed off by rains. Nutrients are leached from the soil by excess water. On occasions, hay has been lost to floods, after harvesting before it could be hauled to barns. Damage and destruction of fences and farm roads are also a significant problem. Farmers have found it very difficult to maintain fences across streams. Debris transported by floodwater becomes lodged on fences and the force and velocity soon breaks wire and pulls posts from the earth. This allows cattle to stray before the fence can be mended.

The city of Winder furnishes water to all densely populated areas in the county, including the towns of Auburn, Bethlehem, Carl, Russell, and Statham. At present, water is secured from Beaver Creek and Mulberry River. Plants on each creek have a capacity of one million gallons per day and this supply is presently taxed to the limit. The population and probable water use required between 1970 and 2000, based on a residential growth curve and present industrial use is as follows:

<u>Year</u>	<u>Population</u>	<u>Average Daily Water Requirement (Gallons)</u>
1970	6,855	2,055,000
1980	8,250	2,475,000
1990	9,900	2,970,000
2000	11,300	3,390,000

Additional industrial demand, which is very likely, will be over and above these requirements. Consulting engineers strongly recommended the city participate in the project by storing water in a floodwater retarding structure.

Braselton and Hoschton, at present, have separate water systems using wells as a source of supply. Two wells produce only 75 gallons per minute for Braselton and Hoschton secures about 200 gallons per minute from one well. Population has about doubled in these two towns in the past 10 years. Interstate Highway 85 with its projected growth corridor is nearby. It is the desire of the governing bodies of the two towns to consolidate the water systems and establish a water and sewer authority to own and operate the systems. Plans are to extend mains to Ednaville and other growing communities. The last well drilled in the vicinity is producing only 15 gallons per minute, consequently consulting engineers have recommended the municipalities participate in the project by adding storage to a floodwater retarding structure. The population and probable water use required between 1970 and 2000 based on a population curve only is as follows:

<u>Year</u>	<u>Population</u>	<u>Average Daily Water Requirement (Gallons)</u>
1970	1,300	123,600
1980	1,845	212,200
1990	2,605	299,500
2000	3,650	419,800

Three industries already exist in Braselton and Hoschton, and it is reasonable to expect additional industrial water needs in the future in addition to the above requirements.

Planned Project:

The proposed watershed project consists of three major endeavors: conservation land treatment for watershed protection; flood prevention; and municipal water supply. The most significant of these is conservation land treatment. Proper conservation measures will be applied on about 3,500 acres of cropland. The most important of these measures are grassed waterways and gradient terraces to safely remove excess water from fields and conservation cropping systems and crop residue use to improve tilth, fertility and insoak. Treatment to be applied to approximately 11,500 acres of grassland will consist of pasture and hay planting and proper management of ponds to enable better grazing distribution thereby preventing overgrazing with resultant erosion. Forestry measures are proposed on 5,782 acres, where 82 acres of critically eroding lands will be stabilized by tree planting, and 5,700 acres of timber stand improvement measures will be installed. Manipulation of stand composition and density will create favorable conditions for maximum production of litter, humus, and forest cover. Wildlife habitat management practices are planned for approximately 1,600 acres. These will consist primarily of food and cover plantings.

Flood prevention structural measures consist of seven single purpose floodwater retarding structures, two multiple purpose structures for flood prevention and municipal water storage, removal of major snags

and fallen trees from approximately 8,750 feet of Little Mulberry River, and streambank protection measures on about 85,675 feet of the main stem and Little Mulberry River. Selective removal of snags and fallen trees will be accomplished on the reach of approximately 8,750 feet of Little Mulberry River shown on the project map. This work is planned through a predominantly agricultural area where farming is practiced very close to the stream. Well anchored logs and stumps creating small pools will not be disturbed. Trees along the banks will not be removed except for those leaning to the extent that they are in imminent danger of falling.

Floodwater retarding and multiple purpose structures will have earthen embankments and vegetative earth emergency spillways. Principal spillways will be reinforced concrete. Dams will range in height from 33 to 56 feet. Volumes of earth fill range from 33,000 to 161,000 cubic yards with total volume for all structures of 809,000 cubic yards. Bottom widths of emergency spillways range from 50 to 400 feet. Adequate fill material is located adjacent to all sites. Dams, borrow areas, and emergency spillways will be vegetated as soon as possible following construction.

Stream bank protection will consist primarily of removal of fallen trees and obstructions that are causing abrupt changes in direction of flow resulting in bank caving. Some areas will require revegetating or riprapping with stone. This work will be done in locations where needed on Little Mulberry River from structure site 11 to the junction of Mulberry River and on Mulberry River from structure site 17 to the end of the watershed. It is expected that about 12 miles will be treated in this total length of about 16 miles. This work will be held in abeyance for two or three years after selective debris removal has been done to determine if the proposed amount is needed.

Biologists of the Georgia Game and Fish Division and the Soil Conservation Service will be consulted on debris to be removed in connection with streambank stabilization and selective debris removal. These inspections will assist Soil Conservation Service engineers regarding selection of debris to be removed, the conduct of actual debris removal operations, and selection of methods by which streambank protection measures are to be constructed. The purpose of these inspections will be to advise SCS personnel on methods of protecting wildlife habitat and fishery resources.

Stream capacity in these areas where bank erosion control measures are needed will be adequate with floodwater retarding structures in place, therefore no channel enlargement is planned for these areas.

One floodwater retarding structure site will be equipped with a water level control gate for waterfowl habitat management. This feature is provided to enable manipulation of water levels so that waterfowl food crops can be grown and subsequently flooded. All floodwater retarding structures will be equipped with gates which will make possible the release of water for use downstream if a need arises.

Requirements for erosion and pollution control measures will be clearly outlined in construction contracts on a site-by-site basis. Extensive guidelines for holding erosion and sediment production to a minimum have been approved. Temporary sediment basins and other mechanical and vegetative measures will be utilized. Immediately upon completion, dams, earth spillways, and borrow areas will be vegetated. In the event construction occurs during seasons not adapted

to establishment of perennial plants, temporary vegetation or mulch will be applied. All applicable state and local pollution control regulations will be adhered to.

Solid waste resulting from project construction will consist primarily of woody material such as tree limbs, brush and stumps. Landowners and/or contractors will market or salvage all merchantable forest products from construction sites. The remaining residue resulting from clearing operations will be disposed of by hauling to a county solid waste disposal area, buried or piled neatly in an area that will not affect the practice and will not present an unsightly appearance. No burning will be permitted in Gwinnett County. In the event it is more practical to burn these materials in the other counties, burning will be in strict compliance with "Rules and Regulations for Air Quality Control" published by the Georgia Department of Natural Resources.

The sponsoring local organizations will operate and maintain structural measures in accordance with agreements to be executed prior to construction. The operation and maintenance of all works of improvement in the project will be in accordance with state and local health agency regulations. The Georgia Game and Fish Division will be consulted on the operation and maintenance of detention reservoirs for fishery and waterfowl management. Individual landowners will maintain conservation land treatment measures according to conservation plans and agreements with Soil and Water Conservation Districts. Maintenance items such as prompt replacement of vegetation on dams and spillways, and timely repair of damaged concrete, steel or earthen portions of structures will be carried out in such manner as to minimize adverse impacts on the environment.

A reliable consulting engineering firm made a study and report of additional municipal water needs for Winder and Braselton. The consulting engineers determined that the drainage area yields to the two structure sites would be adequate for storage recommended. The consultants recommended 737 acre feet be stored at site No. 21 for Winder to supplement their present use of approximately one million gallons per day secured from Beaver Creek and the Mulberry River. The consultants recommended 150 acre feet be stored at site No. 10 for the Braselton-Hoschton area. This will supplement the present peak production of 275 gallons per minute from three wells.

A Georgia Department of Public Health sanitation engineer inspected the drainage area above the two sites and determined water quality would be acceptable. The Department concurred in the plan and recommended that no recreational use of the two sites be permitted, normal pool areas be cleared, and no hog parlors or oxidation ponds be permitted in the drainage areas. This state agency will determine that water quality meets state criteria prior to authorizing use for municipal purposes.

The Historic Preservation Section, Georgia Department of Natural Resources, was asked to identify any known places of historical importance at or near proposed construction sites. Three churches of interest to the Section were cited. All are on Highway Ga. 124 in Gwinnett County and are well removed from proposed construction. The National Register of Historic Places has been consulted with the "Criteria for Effect" applied and no National Register properties will be affected.

The National Park Service, Georgia Department of Natural Resources, the University of Georgia Department of Archaeology, the State Archaeologist, and other interested agencies will be notified prior to beginning construction and will be kept informed of construction schedules. Remnants of an old mill dam and covered bridge that may be of local historical importance will in no way be affected by proposed stream bank erosion control measures or reservoirs. In the event that materials of historical or archaeological significance are encountered during construction, the Secretary of the Interior, Georgia Department of Natural Resources, and the State Archaeologist will be promptly notified. The provisions of Public Laws 86-523 and 89-665 will be strictly adhered to.

Floodwater retarding structures planned will control storm runoff from 57 percent of the watershed.

The total installation cost of the conservation land treatment and structural measures is estimated to be \$2,644,854. Of this amount, \$735,971 is for conservation land treatment.

2. Environmental Impact

a. Conservation Land Treatment

Installation of planned land treatment measures will: (1) reduce sediment production from approximately 32 tons to 24 tons per acre annually on approximately 3,500 acres of cropland, (2) reduce sediment production from 55 tons to 14 tons annually from 382 acres of critical sediment source areas in fields and forest land, (3) reduce sediment production from 147 tons to 28 tons per acre annually on 241 acres of roadbanks, (4) maintain productivity of cropland, grassland and woodland, (5) beautify the landscape, (6) increase farm income and land values, (7) increase infiltration rates and reduce runoff, and (8) complement effects of floodwater retarding structures in reducing average suspended sediment concentrations from approximately 360 ppm to 100 ppm at the downstream terminus of the watershed. Acceleration of conservation land treatment will also bring about an improvement in farming efficiency and economic returns, protect soil and water resources and enhance the beauty of approximately 600 family owned farms, farmettes, and rural residential tracts.

Planting of food and cover crops in field borders and corners (1,660 acres) will provide more food and a better habitat for quail, rabbits, dove and non-game birds and animals. Bicolor lespedeza will be used in most plantings. This plant has attractive blossoms and provides nectar for bees, butterflies and other insects in late summer when few other plants are in bloom.

Approximately 65 ponds are expected to be built under the accelerated conservation land treatment effort. Among the effects of these ponds are recreation, fish production, waterfowl use, livestock and other farm uses, beauty, enhancement values, sediment storage, clearer streams, more stable stream flow and continuous stocking of streams below by escape fish.

Major impacts to the forest land resource associated with the proposed installation and operation of the project are: (1) an improvement in the hydrologic condition of forested areas classified as "poor" (73 percent of

total forest land) to good (one-third of such areas) and fair (the remaining two-thirds) and (2) modification of stand composition to increase desirable species for humus production, wildlife food mast production, and marketability.

b. Structural Measures

Approximately 188 acres of seasonally flooded bottom land hardwoods and about 88 acres of mixed pine and gum will be cleared for the sediment pools behind proposed structures. About 109 acres of pasture will be inundated by these pools. These sediment pools will have a surface area of 385 acres which will inundate 7.4 miles (16 acres) of stream channels. Approximately 147 acres of woodland consisting mostly of pine and sweetgum, and 6 acres of pasture will be occupied by the dams, emergency spillways and borrow areas. These areas will be vegetated with perennial grasses and legumes. This change in land use will result in a loss of timber production and habitat for deer, squirrel and raccoon, while additional habitat for water oriented wildlife and other life forms will be created.

Installation of the project measures will provide various levels of flood protection to approximately 2,404 acres owned or operated by 140 families. All reaches below structures will be provided three-year protection or better except the following areas: (1) The extreme lower end of Upper Mulberry River, (2) Little Mulberry River from the Barrow-Gwinnett County line upstream for a distance of about 1.7 miles, and (3) Duncan Creek just above its confluence with Wheeler Creek. These areas will receive some flooding by the annual flood event due to insufficient channel capacity. The area inundated by the 100-year frequency flood will be reduced 40 percent, the 25-year flood by 53 percent, the 5-year flood by 68 percent, the 2-year flood by 69 percent and the annual flood, 89 percent. Crop and pasture damages will be reduced by 78 percent and non-agricultural damages will be reduced by 89 percent. Protection of approximately 22 bridges and culverts on 22 roads will benefit many watershed residents and others. Essential traffic can move without costly and time consuming detours around washed out bridges and inundated roads.

Damage to floodplain land by sediment deposition will be reduced from 433 acres to approximately 78 acres. Scour damage now occurring on 50 acres will be reduced to about 5 acres after the project is installed.

Inundation of approximately 16 acres of stream channels by floodwater retarding structures will reduce stream habitat. Pickerel, the only stream species in the watershed that will not survive in the structure pools, will be lost (0.7 lbs./ac.) in these areas. Selective debris removal on about 8,750 feet of Little Mulberry River will cause minor losses to game and fish habitat through a predominantly agricultural area (Project Map). Flooding will be of sufficient frequency to decrease habitat values on approximately 241 acres of bottomland hardwood and 110 acres of upland pine-gum woodland. The total area of retarding pools will be inundated on an average of once in 50 years. Agricultural land (pasture) in the flood pools will not be inundated often enough to present significant problems.

Water stored in structure sediment and municipal water supply pools will create a lake fishery resource of some significance. These sediment and municipal water pools (385 acres) will produce from 30 to 40 lbs. of catchable size fish per acre annually. The 72 percent reduction in long-term average annual suspended sediment and reduction of base flow sediment will improve spawning conditions and increase egg hatchability in approximately 29 miles of watershed streams. Waterfowl habitat should be enhanced by proper management of the control gate planned for one floodwater retarding structure and the edge effect of the other eight structures.

During construction, precautions such as sediment traps, mulching, and immediate revegetation will be implemented. However, it is recognized that temporary degradation of water quality due to increased turbidity levels during construction will occur.

Streambank protection measures will result in more vegetation along stream banks to the water's edge, thereby creating a better habitat for fur bearers and other stream oriented wildlife. Land loss will be reduced from over 6 acres to 1.5 acres annually. It is anticipated that those channels presently degrading will continue to do so until the remaining bed material is of a coarse fraction, providing an armor plating with a continuous series of pools and riffles.

c. Economic and Social

Municipal and industrial water storage (279 million gallons) will satisfy the needs of Braselton, Hoschton and Winder. This storage will enable expansion of existing mains into more rural areas and increase the supply available to five small towns presently securing water from the Winder system. Consultants estimate that the water systems will serve approximately 15,000 people by the year 2000. The availability of adequate water supplies will allow expansion of existing light industry and possibly induce creation of additional manufacturing and processing plants. This is needed to provide jobs for local workers and reduce further migration to Atlanta. Expansion of residential areas will be possible. A dependable and adequate source of municipal and industrial water will be immediately available to approximately 8,600 residents of small towns and rural areas. Should expansion of existing light industry and attraction of additional industry occur, the resulting increase in population will require additional services and additional associated development costs. Appropriate shares of these costs will be borne by local taxpayers receiving the benefits. Secondary effects of possible enlarged sewage treatment and disposal would amount to lowering the quality of streams receiving the potential increase in effluent quantity.

Increased agricultural production that will accrue due to project installation will create new demands in business related to agriculture. It is estimated that approximately \$49,000 will be spent annually for products and machinery relating to agricultural production. An additional \$18,000 will be spent annually for harvesting and marketing services.

Forty-five new jobs will be created by funds spent during project installation, and 9 new jobs will be created as a result of direct project benefits. An additional 27 jobs will result from secondary benefits to the local economy.

Project installation will result in better living conditions for local people. The flooding of flood plain lands, roads, bridges, etc., result in damages and hardships to individuals and businesses not necessarily associated with flood plain ownerships. For example the project will improve efficiency in agriculture and reduce production costs by enabling farmers to shift crops from marginal upland to more fertile bottom land, helping to insure timely planting, and helping to eliminate the need for replanting of crops.

The installation of floodwater retarding structures will provide opportunity for population growth and will keep people from moving to nearby urban areas by providing recreational opportunities and needed industrial and municipal water.

A summary of project cost, benefits and benefit cost ratio (Table 6) is attached as Appendix A.

3. Favorable Environmental Effects

1. Reduce erosion, sediment production and runoff and increase infiltration rates.
2. Reduce sediment deposition in streams, ponds, flood plain land and road ditches, resulting in clearer streams and reduced road maintenance cost.
3. Reduce average annual flood damages to agriculture, roads, and bridges by about 72 percent.
4. Provide storage of 279,000,000 gallons of water for municipal and industrial use for Winder, Braselton, Hoschton and several other small towns and rural communities, thereby assuring safe and dependable water for home consumption, lawns and shrubbery.
5. Increase lake fishing in the area by 385 acres in project structures. Additional farm ponds will provide fishing and other forms of wholesome outdoor recreation as well as function to trap sediment, stock down stream areas and beautify the landscape.
6. Enhance waterfowl habitat by manipulation of wildlife gate on one structure, edge effects of other project reservoirs and small ponds.
7. Improve ground feeding wildlife habitat by planting food and cover plants.
8. Improve the forest resource on over 5,000 acres. An improvement in the hydrologic condition of forested areas classified as "poor" (73 percent of total forest land) to good (one-third of such areas) and fair (the remaining two-thirds). Stand compositions will be modified to increase desirable species for humus production, wildlife food mast production and marketability.
9. Introduce into the local economy approximately \$49,000 in additional expenditures for agricultural related products and \$18,000 for additional harvesting and marketing services.
10. Create approximately 81 new jobs as a result of direct project benefits, construction, operation and maintenance and secondary benefits.

4. Adverse Environmental Effects Which Cannot be Avoided

1. Clearing of 407 acres forestland for construction of floodwater retarding structures with resultant losses in production and wildlife habitat for deer, squirrel and raccoon.
2. Loss of about 16 acres of stream fish habitat to be inundated in structure sediment and municipal water pool areas, and temporary damage to fish and small fur bearer habitat on about 8,750 feet of Little Mulberry River through construction activities.
3. Decreased habitat values on 241 acres of bottomland hardwood and 110 acres upland pine-gum woodland in flood pools by temporary inundation. (Total area of flood pools will be inundated on an average of only once in 50 years.)
4. Loss of 115 acres pasture land by inundation.
5. Temporary degradation of water quality due to increased turbidity levels during construction and until disturbed streambanks become stabilized.

5. Alternatives

1. Purchase or zoning of all floodplain for use as a greenbelt, wildlife preserve or production of forest products. Streambank erosion, sediment deposition on floodplain, and road and bridge damage would continue. Habitat for wildlife such as deer, squirrel, raccoon, opossum, beavers, and reptiles would be enhanced. Estimated cost of this alternative \$1,012,000.
2. Applying conservation land treatment practices only. This alternative could reduce sediment deposition in streams by about 55 percent. The sloping topography and soil conditions are such that regardless of cover, once the soils become saturated, rapid runoff occurs. Estimated cost of this alternative is \$735,971.
3. Conservation land treatment, floodwater retarding structures, stream channel enlargement of 12,125 feet, clearing and snagging 8,750 feet and streambank protection measures on 85,675 feet. Flood protection objectives would be attained. Fish and wildlife habitat would be damaged on 12,125 feet of stream channels, and deer, squirrel and raccoon habitat lost to impoundments. Estimated cost \$2,636,000.
4. Conservation land treatment, floodwater retarding structures and no streambank protection or enlargement. Streambanks would continue to erode and protection to agricultural land along Little Mulberry would be inadequate. Loss of habitat for deer, squirrel and stream fish would be lost to the impoundments. More total fishing opportunities would result and water for waterfowl resting would be created. Estimated cost \$2,231,000.
5. Conservation land treatment, and stream channel improvement without floodwater retarding structures. Protection from the one year flood might possibly be realized in some of the upper reaches. Overall protection would be inadequate for present and future land uses. Estimated cost \$2,000,000.

Net average annual benefits that would be foregone by not implementing the project amount to approximately \$41,000.

6. Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity.

Production of agricultural products is the basic use being made of land in the watershed. Based on current trends, this land use will prevail into the foreseeable future even though residential uses and light industry are expected to increase along the major highways. Forest land, field borders and corners, ponds, and idle land will continue to serve as wildlife habitat. Existing and projected ponds furnish enjoyment to many people. Some are open to the public.

The periodic removal and use of forest products through thinning operations will produce usable materials and will benefit the long-term productivity of the forest. Proper management will enhance and protect soil resources of the area. Trees planted and protected on the critically eroding areas of the upland portion of the watershed will reduce the effect of present and past erosion and enhance the long-term productivity of those areas.

Conservation land treatment for the watershed will allow its continued safe use by the present generation while preserving and improving it for the distant future. Structural measures are designed to be fully effective for 100 years, and even after this period should continue to provide substantial benefits. Planned water storage is adequate for projected growth to the year 2000.

The Upper Mulberry River Watershed is located near the headwaters of the Altamaha River which, along with its tributaries, drains portions of north central and southern Georgia. The Altamaha River Basin contains 9,088,000 acres or approximately 24.3 percent of the total land area of the State. Portions of the Southern Piedmont and Coastal Plain physiographic regions are located in the basin.

The Upper Mulberry River Watershed, if authorized, will be one of 13 in the Altamaha River Basin approved for construction under authority of P. L. 566. The drainage area of this watershed constitutes less than one percent of the basin drainage area. The effects of this watershed project on the Altamaha River Basin as a whole will be insignificant. However, cumulative effects of the project when added to effects of the 12 existing watershed projects, will make a measureable improvement to the environment and well-being of citizens residing within this basin. Reduction of sediment, a major water pollutant, is one of the reasons for installing P.L. 566 watershed projects. Installation of these projects, comprising approximately 6.8% of the Altamaha River Drainage Basin, will eventually result in a 55% reduction in gross erosion from their respective drainage areas. The Mulberry River drains into the Middle Oconee River, one of the tributaries to the Oconee River which is a major tributary to the Altamaha River. When the Upper Mulberry River Watershed Project and another authorized project in the headwaters of the Middle Oconee River are installed,

a slight decrease in flood peaks on the Middle Oconee River will result. Other P.L. 566 projects are too widely scattered throughout the basin to have significant effects on flood peaks of the larger rivers.

Installation of the Upper Mulberry River Watershed Project is not expected to cause a significant reduction in the low value stream fishery resources of the watershed. The major stream channels within the project are typically Piedmont, with deep sandy bed material and very limited food and habitat for fish. This project proposes 1.7 miles of channel work (limited debris removal), on a previously dredged tributary in an agriculturally productive reach. Fish and wildlife habitat damage will be slight and temporary. The installation of 9 floodwater retarding structures with a surface area of 385 acres will provide warm water fishing to compensate for any losses in the stream fishery resource. Chain pickerel is considered to be the only local game fish that is not compatible with warm water impoundments.

Thirty-three floodwater retarding structures, and two irrigation reservoirs have been installed in the watershed projects located in the basin. The work plans include provisions for constructing 37 more floodwater retarding structures, 15 irrigation reservoirs and three impoundments with storage for fish and wildlife or recreation.

Conservation land treatment practices have been applied to approximately 159,250 acres with plans to treat an additional 150,000 acres. To date, 118.2 miles of channel improvement have been installed on perennial streams, 92.4 miles of which were on man-made channels, and 25.8 miles on natural channels. Channel improvement has been installed on 11.8 miles of intermittent, poorly defined streams.

Approximately 50.5 miles of planned channel improvement measures for flood prevention have not as yet been installed. These measures include 34 miles on perennial man-made channels, and 16.5 miles on poorly defined intermittent channels. This work was planned before the enactment of the National Environmental Policy Act, P.L. 91-190, and recent changes in planning policies and criteria. As a result of a recent review of the plans the proposed work has been placed in the following categories:

Minor or no known adverse effects	12.5 miles
Some adverse effects	37.2 miles
Serious adverse effects	0.8 miles

Watershed work plans including channel improvement with adverse effects will be modified as a result of additional studies and recommendations of biologists, representing the Soil Conservation Service, the Bureau of Sport Fisheries and Wildlife, and the Georgia Game and Fish Division. Effects of the Upper Mulberry River Watershed project are considered representative of those in completed projects when the modifications designed to reduce or eliminate adverse effects have been made.

7. Irreversible and Irretrievable Commitments of Resources

Acres by land use that will be committed to dams, spillways and pool areas are:

Pasture	115
Woodland	407
Stream channel	16

The structure pools will inundate 385 acres of land now in woodland and pasture, thus precluding these areas from such use in the future. Stream channels inundated (16 acres) will result in a loss of habitat for pickerel fish.

8. Consultation with Appropriate Federal Agencies and Review by State and Local Agencies Developing and Enforcing Environmental Standards

a. General

The State Soil and Water Conservation Committee approved the Sponsoring Local Organizations' application for assistance under provisions of P.L. 566 on January 24, 1966. Prior to beginning preliminary surveys and investigations, a public meeting was held the night of June 19, 1967 in the County Line School auditorium. Biologists representing the Bureau of Sport Fisheries and Wildlife, Georgia Game and Fish Commission, and Soil Conservation Service made a study of the watershed and prepared reports listing fish and wildlife resources in the watershed.

Results of the preliminary surveys and investigations were explained at a public meeting at the Braselton School in January, 1968. Landowners, sponsors, and others attending the meeting were unanimous in approval of the results and requested immediate preparation of a watershed work plan. Authorization for the Soil Conservation Service to assist the Sponsoring Local Organization in developing a work plan was granted by the Administrator of the Soil Conservation Service on April 1, 1968. Fifteen federal and state agencies and other organizations were promptly notified of this authorization.

After numerous conferences with the sponsors, agreement was reached on the basic components of the plan and presented at a public meeting in the Braselton School auditorium on October 29, 1969. There were no objections raised and the group approved the proposals and requested the work plan be finalized as soon as possible. The work plan draft was sent to the following federal and state agencies and others for review: State Planning Officer, Atlanta Region Metropolitan Planning Commission, Georgia Mountain Planning and Development Commission, State Game and Fish Commission, State Department of Public Health, Farmers Home Administration, Bureau of Sport Fisheries and Wildlife, U. S. Forest Service and members of the Sponsoring Local Organizations.

Comments from the Georgia Game and Fish Commission opposing stream channel enlargement were received and discussed with the sponsors. Agreement was reached with the sponsors to delete this practice and **accept** lower levels of protection in the reaches affected. An informal field review (public hearing) of the work plan was held in Winder, Georgia on July 22, 1971. All federal and state agencies and organizations known to have an interest were invited to attend this review and express their agencies' views. Among those invited were: U. S. Forest Service, Bureau of Sport Fisheries and Wildlife, Agricultural Stabilization and Conservation Service, Farmers Home Administration, Bureau of Outdoor Recreation, Cooperative Extension Service, State Soil and Water Conservation Committee, Georgia Forestry Commission, Georgia Game and Fish Commission, State Planning Officer, State Water Quality Control Board, Georgia Natural Areas Council, Georgia Conservancy, Southeast Basins Inter-Agency Committee representative, and Corps of Engineers. Verbal statements of all in attendance were favorable. The Georgia Game and Fish Department sent a letter to the State Conservationist, for the record of the hearing, objecting to streambank protection measures included in the plan. As it later turned out, there was a misinterpretation of the language of the plan which was corrected.

The work plan was unanimously approved by the landowners, sponsors, and others in attendance.

The following state and local entities were invited to comment on the preliminary draft statement: The Governor's Office, State Clearing House, State Soil and Water Conservation Committee, Georgia Forestry Commission, Georgia Game and Fish Division, State Water Quality Control Board (Environmental Protection Division), Georgia Natural Areas Council and Georgia Conservancy.

b. Discussions and Disposition of Each Problem, Objection, or Issue Raised on the Draft Environmental Statement by Federal, State, and Local Agencies, Private Organizations and Individuals.

Comments on the draft environmental statement were requested and received from the following agencies and entities:

1. Governor of Georgia
2. State Clearing House
 - a. Earth and Water Division, Department of Natural Resources
 - b. Game and Fish Division, Department of Natural Resources
 - c. Planning Division, Office of Planning and Budget
 - d. Department of Transportation
3. The Appalachian Regional Commission
4. Department of the Army
5. Environmental Protection Agency
6. Department of Commerce
7. Department of Health, Education, and Welfare
8. Department of the Interior
9. Department of Transportation, United States Coast Guard

SUMMARY OF COMMENTS AND RESPONSES

Each issue, problem, or objection is briefly summarized and a response given on the following pages. Comments are numbered where agencies have supplied multiple comments. Copies of the comments in their entirety are attached as Appendix B.

1. Governor of Georgia

Comment: The work program and the draft Environmental Impact Statement relative to the Upper Mulberry River Watershed project have been reviewed by appropriate State Agencies per various Federal requirements. The results of that review are summarized in the accompanying Memorandum directed to you from the State Clearinghouse. As long as the recommendations in this Memorandum are carried out, I approve of the work program.

As I have in the past, I am asking that the State Clearinghouse be notified about the individual projects prior to actual development.

Response: Suggestions and recommendations provided by the several State Agencies and summarized by the Clearinghouse have been incorporated into the work plan and environmental statement as appropriate or responded to on pages following.

2. State Clearinghouse

Comment: Prior to actual development, the State Clearinghouse should be notified about the individual projects which will implement this work program. State Clearinghouse Control Number 72-10-30-03 may be used for such referral on these projects.

Response: The State Clearinghouse will be notified prior to initiation of project development. The control number will be cited in the notification.

a. Earth and Water Division, Department of Natural Resources

Comment: The Earth and Water Division of the Georgia Department of Natural Resources does not anticipate geological problems in the site area.

Response: None

b. Game and Fish Division, Department of Natural Resources

Comment: Recommends that:
(1). The clearing of banks be deleted and any snagging be selective (Refer to paragraph 2, page 3 Draft Environmental Impact Statement).

(2) Representatives of the Soil Conservation Service and the Game and Fish Division of the Department of Natural Resources cooperatively select the logs and debris to be removed.

(3) The stream bank protection measures as described on page 8, Draft Environmental Impact Statement, be held in abeyance for two or three years after the selective snagging has been done to determine if the proposed 85,675 feet of stream bank protection measures are needed. If the need is demonstrated, ameliorative measures could then be taken. Additionally, the recommendation is made that there be participation by both agencies in selecting the methods by which the stream bank protection measures are conducted.

The Game and Fish Division is pleased the Soil Conservation Service has eliminated all previously planned channel excavation in this project.

Response: The work plan and final environmental statement have been changed to include selective debris removal in lieu of clearing and snagging. Game and Fish Division and SCS biologists will be consulted on debris to be removed. These inspections will be to assist and consult with SCS engineers regarding selection of debris to be removed and the conduct of actual debris removal operations. The purpose will be to advise SCS personnel on methods of protecting wildlife habitat and fishery resources.

Installation of planned streambank protection measures will be held in abeyance for two or three years after selective debris removal has been accomplished to determine if still needed. If the need is demonstrated, both agencies will participate in selection of methods by which stream bank protection measures are conducted. This cooperative consultation will be similar to that described for the debris removal operation.

c. Office of Planning and Budget

Comment: The Planning Division of the Office of Planning and Budget feels it is important to make adequate provisions for sewage treatment a project objective along with the provision of municipal water supplies. This Planning Division finds sewage treatment is not mentioned in the Draft Environmental Impact Statement as a necessary complement to water supply.

Response: Planning and installation of sewage treatment facilities does not come under the jurisdiction of Public Law 566. Consequently it was not included as a project objective in the P.L. 566 work plan. Quality of water in the municipal water supply pools will be continuously monitored by the State. Should water quality drop below acceptable state standards, corrective measures will be taken to raise the water quality back to acceptable standards before further use of the water source is made. Such corrective measures may include additional sewage treatment facilities if needs so dictate.

d. Department of Transportation

Comment: This organization has reviewed the draft environmental statement and agrees with the conclusions presented therein. (A thorough and well written summarization of road alterations involved was included in comments to the State Clearing House.)

Response: None

3. The Appalachian Regional Commission

Summary of Comment: We do not find the project in conflict with any known Appalachian Program development. The suggestion is made that prior to implementation, priorities be established to test the effectiveness of land treatment measures before massive channel improvement efforts are undertaken. A good program of farm land stabilization and roadbank stabilization may prove more effective than anticipated in reducing run-off in addition to reducing erosion and eventual deposition in stream channels. Concern is also expressed as to effects of potential growth and development on the watershed. New growth will alter the natural flood plain and flood frequencies. Other needs to assure a good balance and relationship between development in the watershed should be included. Alternative "1" should be applied to some extent regardless of other measures applied in the watershed.

Response: Previously proposed channel excavation has been deleted from the proposal. Approximately 8,750 feet of selective debris removal and spot treatment of eroding streambanks will be accomplished in such a manner as to minimize disturbance of fish and wildlife habitat. Due to the rolling topography, high intensity rainfall and heavy, clayey soil types it has been determined that acceleration of the conservation land treatment program alone could reduce sediment deposition in streams substantially but once the soils become saturated, rapid run-off occurs even though a good vegetative cover exists. The suggestion of comparing extent of land to be inundated permanently to acres protected is well taken. Reservoirs are, for the most part, located in the headwater reaches where floodplains are usually narrow and relatively undeveloped.

Planners utilized projected areal growth statistics in computing sediment yield storage requirements and runoff. Under existing criteria, agricultural protection was the highest level economically justified inasmuch as there is at present no urban-type development in the floodplain. In the absence of land use regulations, the sponsors have agreed to restrict floodplain development to the extent possible. There is a growing awareness among developers and individuals of the importance of building outside of flood prone areas. Part of the project is located in two operational RC&D project areas. The project coordinators recognize the need for providing guidance to the sponsors and

developers in identifying flood prone areas. Gwinnett County already has sediment control and flood plain zoning ordinances in effect.

The need for a good balance and relationship between other needs and potential urban development in the watershed and purchase or zoning of flood plain is recognized. Although no known provisions for coping with this type of problem exist under Public Law 566, the sponsors and state and federal agencies assisting in implementing the work plan will remain alert to this important need.

4. Department of the Army

Summary of Comment: No conflict with any projects or current proposals of this Department are foreseen. The draft environmental statement satisfies requirements of Public Law 91-190 insofar as this Department is concerned.

Response: None

5. Environmental Protection Agency

(1) Summary of Comment: It is not expected that the project will result in any significant long-term adverse effects on water quality. However, temporary adverse effects are likely due to increased turbidity levels during construction and until bank stabilization takes place. This should be indicated as an adverse effect. Erosion control measures at least equal to those outlined in "Engineering Memorandum - 66" should be practiced.

Response: Temporary degradation of water quality below construction sites has been added as an adverse effect. Appropriate erosion control measures are installed during construction as a matter of policy. A discussion of this appeared on page 8 of the draft statement.

(2) Summary of Comment: Water for municipal supply should meet the National Technical Advisory Committees water quality criteria.

Response: The Department of Human Resources made a study of the watersheds above the two municipal water storage sites. In a report to the State Conservationist, the Director stated that the Water Supply Service Engineers concurred in the plan. The State of Georgia requires slightly higher standards of purity for municipal water supplies than the National Technical Advisory Committee's criteria. Consulting engineers retained by the sponsors also determined that the water quality was acceptable. These private engineers also determined needed storage requirements. Quality of water in the municipal water supply pools will be continuously monitored by the State. Should water quality drop below acceptable State standards, corrective measures will be taken to raise the water quality back to acceptable standards before further use of the water source is made.

(3) **Summary** Insufficient consideration has been given to disposal of solid waste resulting from project construction. Waste should be disposed of in accordance with State solid waste regulations. **Comment:** There may be a short-term adverse effect on the ambient air quality if vegetation from land clearing and construction waste materials are disposed of by open burning. If materials are disposed of in this manner, methods should be in accordance with applicable State regulations.

Response: As a matter of policy, construction waste will be disposed of in accordance with State rules and regulations. No-burn regulations are in effect in Hall and Gwinnett Counties. Material, mostly limbs and stumps will be buried after landowners salvage all usable timber in the construction areas.

(4) **Summary** Mosquito control authorities should be consulted on the selection of and management of areas for placement of spoil, for impoundments, **Comment:** and for excavation of borrow material.

Response: Prior to beginning construction, County Health Department representatives inspect floodwater retarding structure construction sites and issue permits. Agreement is reached as to needed mosquito control practices. Later, the Department of Human Resources issues permits to impound water in the sites. No channel excavation is planned in the project, consequently placement of excavated spoil is not applicable.

6. Department of Commerce

Summary The project is located within parts of Planning and Development of Districts funded by the Economic Development Administration. **Comment:** The Overall Economic Development Programs (OEDP) developed by both the Georgia Mountains District and the Northeast Georgia District endorse the watershed project as part of the OEDP of their respective districts. Their endorsements are based both upon the potential economic impact upon the watershed resulting from the practices, and conservation and ecological considerations. Most agricultural production is low with the majority of the farms producing less than \$3,000 per year. The favorable environmental and economic effects of this project appear to outweigh ecological damages.

Response: None

7. Department of Health, Education and Welfare

Summary This project does not appear to represent a hazard to public of health and safety. However, it is recommended that guidelines **Comment:** outlined in DHEW Publication No. (HSM) 72-10009 be employed during the development of recreational facilities.

Response: Although no project recreational developments are included in the plan, the single purpose impoundments may provide some incidental recreation opportunities, primarily in the form of fishing. Should such use develop, the sponsors are encouraged to provide facilities in accordance with the publication cited, "Environmental Health Practice in Recreational Areas". They will, of course, be required to comply with local and state sanitary regulations.

8. Department of the Interior

- (1) Summary of Comment: The proposed project will not adversely affect any existing, proposed, or known potential units of the National Park system or any known historic, natural, or environmental education sites eligible or considered potentially eligible for inclusion in the National Landmark Programs. Because of the small areal extent of the proposed structures, they should have no adverse effect on the mineral resources of the study area. Request the Director, Southeast Region, National Park Service be kept informed of progress so that archeological work can be programmed and completed prior to start of construction at Sites 10 and 21.

Response: The National Park Service, Georgia Historical Commission, State Archaeologist and other state and federal agencies will be notified immediately after the project is authorized. Appropriate officials will also again be notified well in advance of construction at individual sites. Supervisory personnel and contractors will be continuously alert for any evidence of artifacts or other objects of archaeological or historical importance at construction sites. If any are found, the appropriate state and federal officials will be immediately notified.

- (2) Summary of Comment: The project will have a minimal impact on fish and wildlife resources. Request that report of Bureau of Sport Fisheries and Wildlife accompany the plan when forwarded to the Congress.

Response: As is customary, the Bureau of Sport Fisheries and Wildlife report will accompany the project plan to the Congress.

- (3) Summary of Comment: The statement lacks meaningful data on the geology, hydrology, and meteorology in the project area. Further the statement lacks specifics regarding the project proposal and anticipated method of installation.

Response: Additional data on geology, hydrology, and meteorology of the area has been added to the final statement. In addition, more details of project installation have been added to the statement as suggested.

- (4) Summary of Comment: The statement should assess secondary effects of increased sewage treatment and disposal which would stem from induced economic growth.

Response: The City of Winder has existing treatment facilities with the potential for future enlargement. The Town of Braselton does not at present have treatment facilities other than localized septic tanks. Officials of the two towns are aware of existing State regulations and have available the services of a well known consulting engineering firm to prepare water and sewerage plans when the need arises. Probable secondary impacts of induced economic growth have been added to the impact section as suggested.

(5) Summary of Comment: Other mineral resources such as granite and clay should be mentioned.

Response: As suggested, a statement was added explaining why granite and clay resources are not being extensively used at present.

(6) Summary of Comment: The statement should discuss the archaeological and historical values of the area and indicate whether such values are present or absent. If present, effects of the project on these resources should be identified. An archaeological survey appears to be needed. The statement should indicate the National Register of Historic Places has been consulted and that the Georgia Historical Commission has been contacted.

Response: The Georgia Historical Commission (Historic Preservation Section, Georgia Department of Natural Resources) was provided a map showing areas of proposed construction and the location of the remnants of two areas of possible local historical interest (Thompson's Mill and an old covered bridge). The National Register of Historical Places was consulted. There are no known places of historical or archaeological significance at or near proposed construction sites. Statements to this effect have been added as suggested.

9. Department of Transportation, U.S. Coast Guard

Comment: We have no objection to this project.

Response: None

9. List of Appendices

Appendix A - Comparison of Benefits and Costs for Structural Measures

Appendix B - Letters of Comment Received on the Draft Environmental Statement

Appendix C - Project Map

Approved By: Kenneth Elgant
Administrator

Date DEC 20 1973

COMPARISON OF BENEFITS AND COSTS FOR STRUCTURAL MEASURES

Upper Mulberry River Watershed, Georgia

(Dollars) 1/

Evaluation Unit	Average Annual Benefits							Average Annual Cost	Benefit Cost Ratio	
	Damage Reduction	More Intensive Land Use	Changed Land Use	Municipal Water Supply	Land Use and Development	Redevelopment	Secondary			Total
Floodwater retarding structures 6, 7, 8, 9, 17, and 18; multiple-purpose structure 10; critical area planting and streambank protection	35,649	14,817	8,106	3,934		24,208	16,615	103,329	75,577	1.4:1
Floodwater retarding structure 11; multiple-purpose structure 21; channel improvement and streambank protection	5,825	5,100	2,790	7,376	7,841	12,705	6,462	48,099	20,992	2.3:1
Project Administration	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	10,068	XXXX
GRAND TOTAL	<u>41,474^{2/}</u>	19,917	10,896	11,310	7,841	36,913	23,077	151,428	106,637	1.4:1 ^{3/}

1/ Price base - benefits adjusted normalized.

2/ In addition, it is estimated that land treatment measures will provide flood damage reduction benefits of \$846 annually.

3/ Based upon 5-1/8 percent discount rate applicable when the plan was developed. The benefit-cost ratio is 1.2 to 1.0 based upon the discount rate of 6-7/8 percent, current normalized prices and current construction costs. This is in accordance with the Water Resources Council's Principles and Standards which became effective on October 30, 1973.



DEPARTMENT OF THE ARMY
OFFICE OF THE UNDER SECRETARY
WASHINGTON, D.C. 20310

APPENDIX B

24 JAN 1973

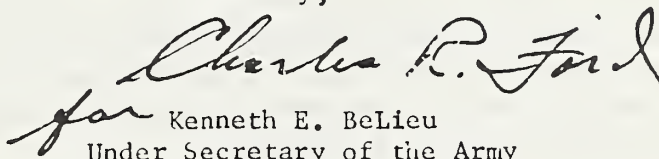
Honorable Thomas K. Cowden
Assistant Secretary of Agriculture
Washington, D. C. 20250

Dear Dr. Cowden:

In compliance with the provisions of Section 5 of Public Law 566, 83d Congress, the Administrator of the Soil Conservation Service, by letter of 12 October 1972, requested the views of the Secretary of the Army on the work plan for Upper Mulberry River Watershed, Georgia.

We have reviewed this work plan and foresee no conflict with any projects or current proposals of this Department. The draft of the environmental statement satisfies the requirements of Public Law 91-190, 91st Congress, insofar as this Department is concerned.

Sincerely,

for 
Kenneth E. Belieu
Under Secretary of the Army

SOIL CONSERVATION SVC.
WASH., D.C.

1973 JAN 31 10 20

MAIL ROOM



THE ASSISTANT SECRETARY OF COMMERCE
Washington, D.C. 20230

December 20, 1972

Mr. Kenneth E. Grant
Administrator
Soil Conservation Service
U.S. Department of Agriculture
Washington, D. C. 20250

SOIL CONSERVATION SVC.
WASH., D.C.

72 DEC 29 AM 10 41

RECEIVED
MAIL ROOM

Dear Mr. Grant:

The draft environmental impact statement for the Upper Mulberry River Watershed, Georgia, which accompanied your letter has been received by the Department of Commerce for review and comment.

The Department of Commerce has reviewed the draft environmental statement and had the following comments to offer for your consideration.

This project which proposes to apply multiple land treatment and water conservation measures to some 61,487 acres of land and water resources in the Upper Mulberry River Watershed is located within parts of three separate Planning and Development Districts within Georgia.

Two of the districts affected, which are funded by the Economic Development Administration, include the counties of Barrow and Jackson, within the boundaries of the Northeast Georgia Planning and Development Council and the County of Hall within the Georgia Mountains Planning and Development Council.

The Overall Economic Development Programs developed by both the Georgia Mountains District and the Northeast Georgia District endorse the Upper Mulberry River Watershed improvement planned as part of the OEDP of their respective districts. Their endorsements are based both upon the potential economic impact upon the watershed resulting from the practices and conservation and ecological considerations.

The OEDP for the Northeast Georgia Planning and Development District which includes the counties of Barrow and Jackson under the Mulberry Watershed Project had the following to offer in March 1967:

Watershed--within Northeast Georgia there are 21 small watersheds potentially eligible for assistance under P.L. 566--ten watersheds work plans have been approved by Congress. It is hoped the other eleven (including Upper Mulberry) will be developed in the near future.

On many farms in the District soil erosion is a common problem which could in large measure be alleviated by implementation of watershed work plans.

The OEDP prepared by the Georgia Mountains Planning and Development Districts lists watershed improvement as an "A" priority item:

Improvement of our water and drainage systems in all counties within the district will continue to be a necessity before economic development can proceed and is assigned Priority "A".

We support meaningful Watershed Programs in our counties and will assist all cities and towns in planning for water pollution prevention progress. Our staff will continue compilation of data on District Watershed Resources.

The Upper Mulberry River Watershed Project aids forest and agricultural land treatment to reduce erosion and increase productivity. Forestry products within the Northeast Georgia District alone account for some \$22 million in gross annual income for the area. The industry generates some 1,463 jobs, a figure which could be increased with improved land use and forestry production methods on the 43,011 acres of woodland scheduled for improved practices.

Agricultural lands, comprising some 3,868 acres of cropland and 9,960 acres of pasture, are in serious need of improved practices if the economy of the area is to be raised. Most agricultural production is low with the majority of the farms producing less than \$3,000 per year.

The favorable environmental and economic affects of this project appear to outweigh the ecological damages listed as the loss of 407 acres of forestland for floodwater retarding structures, loss of some habitat for wildlife, and loss of some 115 acres of pasture land by inundation.

We hope these comments will be of assistance to you in the preparation of the final statement.

Sincerely,

A handwritten signature in cursive script that reads "Sidney R. Galler".

Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20201

Mr. Kenneth E. Grant
Administrator
Soil Conservation Service
U.S. Department of Agriculture
Washington, D. C. 20250

RECEIVED
OCT 11 PM 1 57
SOIL CONSERVATION SVC.
WASH. D.C.

Dear Mr. Grant:

This is in response to your letter dated October 12, 1972, wherein you requested comments on the Watershed Work Plan and draft environmental impact statement for the Upper Mulberry River Watershed, Georgia.

This Department has reviewed the health aspects of the above project as presented in the documents submitted. This project does not appear to represent a hazard to public health and safety. However, it is recommended that guidelines outlined in the following publication be employed during the development of recreational facilities:

"Environmental Health Practice in Recreational Areas"
DHEW Publication No. (HSM) 72-10009.

The opportunity to review the Watershed Work Plan and draft environmental impact statement is appreciated.

Sincerely yours,

Merlin K. DuVal, M.D.
Assistant Secretary for Health



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-72/1196

DEC 26 1972

U.S. DEPARTMENT OF THE INTERIOR
WASHINGTON, D.C.

12:30 PM '72

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MAIL ROOM

Dear Mr. Secretary:

This is in reply to your letter of October 12, 1972, requesting our views and comments on a work plan and draft environmental statement for the Upper Mulberry River Watershed, Georgia.

The proposed project will not adversely affect any existing, proposed, or known potential units of the National Park System or any known historic, natural, or environmental education sites eligible or considered potentially eligible for inclusion in the National Landmark Programs. In addition, because of the small areal extent of the proposed structures, they should have no adverse effect on the mineral resources of the study area.

Multipurpose structures Nos. 10 and 21 will require compliance with the Federal Reservoir Salvage Act (P.L. 86-523). We request that the Director, Southeast Region, National Park Service, 3401 Whipple Avenue, Atlanta, Georgia 30344, be kept informed of the progress of these proposals so that the necessary archeological work can be programmed and completed prior to the start of construction. Should you desire to initiate early action in response to the Federal Reservoir Salvage Act, the National Park Service can provide assistance in arranging for any needed archeological work to be undertaken by a cooperating institution on a reimbursable basis.

Upper Mulberry River and the major tributaries support a low-to-moderate value fishery composed primarily of large-mouth bass, bluegill, and catfishes. Wildlife resources are also of low-to-moderate value and consist primarily of squirrel, rabbit, fox, and raccoon. Quail, dove, whitetail deer, and wood duck are also present. Migrant waterfowl usage of the watershed is low. Accordingly, the proposal will have a minimal impact on the fish and wildlife

resources. Further, we request that the enclosed report of our Bureau of Sport Fisheries and Wildlife accompany the work plan when it is forwarded to the Congress.

We have reviewed the draft environmental statement and submit the following comments for your consideration and use.

The statement does not contain any meaningful data on the geology, hydrology, or meteorology in the study area nor does it incorporate directly or by reference the summaries of such data and information contained in the work plan. Further, the statement does not describe the location, dimensions, construction methods, or source of materials; various structural proposals and the land treatment measures are not adequately discussed. Lacking such data, the statement does not contain an adequate base to assess the environmental effects of the proposal on the geology or the hydrology of the area.

We note that the proposal will provide increased water supplies to rural areas and growing small communities for domestic and light industry purposes. The statement should also assess the secondary effects of increased sewage treatment and disposal which would stem from this induced economic growth.

The statement does mention the recovery of sand and gravel within the watershed. While these are the only mineral commodities that have commercial possibilities at present, the basin does contain other mineral resources such as granite and clay. These resources can also be cited with the notation that due to the distance from the marketing area, no attempts have been made to develop these resources. We also find that the statement provides an adequate discussion on the fish and wildlife resources of the basin.

The statement should discuss the archeological and historical values of the study area and indicate whether such values are present or absent. If the values are present, then the effects of the project on these cultural resources should be identified and discussed under the appropriate sections of the statement. An archeological survey of the project appears to be needed to (1) determine the presence or absence of such

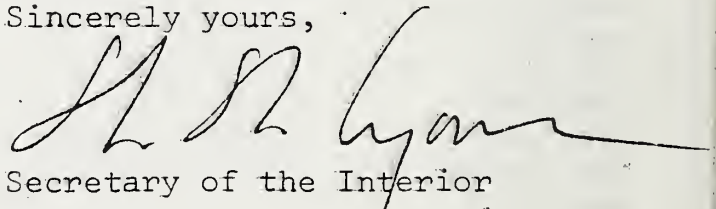
values, their significance and extent; (2) provide a basis for adequate evaluation for the needs of the state-ment; and (3) define any salvage program and cost to mitigate any damage to the resource base.

The statement should contain (1) a sentence indicating that the National Register of Historic Places has been consulted with the "Criteria for Effect" applied and that no National Register properties will be affected, or (2) provide a listing of the properties to be affected, an analysis of the nature of the effect, a discussion of the ways these effects were taken into account, and an account of the steps taken to ensure compliance with Section 106 of the National Historic Preservation Act of 1966 in accordance with the procedures of the Advisory Council on Historic Preservation as they appear in the Federal Register of March 15, 1972.

The statement should contain evidence of contact with the State Historical Preservation Officer and a copy of his comments as to the effects of this project on any historical or archeological resources which may be in the process of nomination to the National Register of Historic Places. For such information, you should contact the Director, Georgia Historical Commission, 116 Mitchell Street, S.W., Atlanta, Georgia 30303.

We wish to thank you for the opportunity to review the work plan and draft environmental statement for this project.

Sincerely yours,



Secretary of the Interior

Deputy Assistant

Honorable Earl L. Butz
Secretary of Agriculture
Washington, D. C. 20250

Enclosure



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS (GWS)
U.S. COAST GUARD
400 SEVENTH STREET SW
WASHINGTON, D.C. 20590
PHONE: 202-426-2262

Honorable Kenneth E. Grant
Administrator
Soil Conservation Service
Department of Agriculture
Washington, D. C. 20250

RECEIVED
NOV 15 1972
U.S. COAST GUARD
WASHINGTON, D.C.

Dear Mr. Grant:

This is in response to your letter of October 16, 1972 addressed to Admiral Bender transmitting a draft environmental statement for the Upper Mulberry River Watershed, Georgia for our review and comment.

The Department of Transportation has reviewed your proposed draft statement. We have no comments to offer and we have no objection to this project.

The opportunity for the Department of Transportation to review the proposed impact statement for the Upper Mulberry River Watershed is appreciated.

Sincerely,

J. D. McANN
Captain, U. S. Coast Guard
Acting Chief, Office of Marine
Environment and Systems

ENVIRONMENTAL PROTECTION AGENCY

REGION IV

1421 Peachtree St., N.E., Atlanta, Georgia 30309

November 29, 1972

NOV 29 1972
6 11 10 AM
SOIL CONSERVATION SVC.
WASHINGTON, D.C.

Mr. Kenneth E. Grant, Administrator
Soil Conservation Service
U.S. Department of Agriculture
Washington, D.C. 20250

Dear Mr. Grant:

We have reviewed the Draft Environmental Impact Statement on Upper Mulberry Watershed in Georgia and offer the following comments:

It is not expected that the project will result in any significant long-term adverse effects on water quality. However, temporary adverse effects are likely due to increased turbidity levels during construction and until bank stabilization takes place. Therefore, paragraph 5 of the summary sheet and paragraph 4 on Page 13 of the Statement should indicate as an adverse effect the temporary degradation of water quality due to increased turbidity levels during construction and until the stream banks become stabilized.

Furthermore, erosion control measures at least equal to those outlined in the U.S.D.A. "Engineering Memorandum-66" should be practiced. Also, the Environmental Statement and the work plan should indicate that the water for municipal supply will meet the National Technical Advisory Committee's water quality criteria.

In another area of concern, insufficient consideration has been given to disposal of solid waste that would result from the project. Land clearing waste, construction and demolition debris, and excavation materials could cause short-term adverse environmental impacts unless disposed of in accordance with State solid waste management rules and regulations. We urge that solid waste disposal procedures be submitted to and receive the approval of the State solid waste management program before work on the project is started. In addition, mosquito control authorities should be consulted on the selection and management of areas for placement of spoil, for impoundments, and for excavation of borrow material.

Finally, there may be a short-term adverse effect on the ambient air quality if vegetation from land clearing and construction waste materials are disposed of by open burning. If these materials are disposed of in this manner, it should be in accordance with the applicable State air pollution regulations.

We would appreciate five copies of the Final Environmental Impact Statement when it is available, and if we can be of further assistance to you in any way, please let us know.

Sincerely,

James R. Westlake
John/ Jack E. Ravan
Regional Administrator

THE APPALACHIAN REGIONAL COMMISSION

1666 CONNECTICUT AVENUE

WASHINGTON, D.C. 20235

OFFICE OF
FEDERAL COCHAIRMAN

DEC 7 1972

Kenneth E. Grant
Administrator
U. S. Department of
Agriculture
Soil Conservation Service
Washington, D.C. 20250

RECEIVED
APR 11 1973
SOIL CONSERVATION SVC.
WASHINGTON, D.C.

Dear Mr. Grant:

We have reviewed both the Work Plan for the Upper Mulberry River Watershed in Barrow, Gwinnett, Hall and Jackson Counties, Georgia and the draft Environmental Statement as requested in your letter of October 12, 1972. We do not find the project in conflict with any known Appalachian Program development.

Regarding the Environmental Statement, it would appear that matters of environmental concern raised by State and local officials and the public at large have been resolved. We too share the concerns of others in such extensive channel improvements. No doubt there are major areas needing channel improvement. We would suggest that prior to actual implementation, priorities be established to test the effectiveness of land treatment measures before massive channel improvement efforts, i. e., a good program of farm land stabilization and roadbank stabilization may prove more effective than anticipated in reducing run-off in addition to reducing erosion and eventual deposition in stream channels. Additionally, concern for the number of acres to be permanently inundated should be related to the number of acres normally being flooded annually. The loss of these acres may not loom so great, if their economic/social values have been maintained at a low level due to periodic flooding.

We note that this watershed is adjacent to the growing Atlanta area. It is also within ten miles of Lake Sidney Lanier. Both factors, together with I-85 bisecting the watershed, give rise to concerns of potential growth and its effects on the watershed. New growth

Kenneth E. Grant

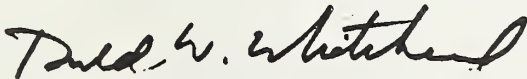
Page Two

DEC 7 1972

will alter the natural flood plain and flood frequencies. For the Work Plan to be complete, we believe it should include a statement regarding other needs to assure a good balance and relationship between development and the watershed. Alternative "1" should be applied to some extent regardless of other measures applied in the watershed.

We thank you for this opportunity to review the Work Plan and Environmental Statement.

Sincerely,

A handwritten signature in cursive script, reading "Donald W. Whitehead".

DONALD W. WHITEHEAD
Federal Cochairman



Executive Department
Atlanta 30334

Jimmy Carter
GOVERNOR

Hamilton Jordan
EXECUTIVE SECRETARY

January 15, 1973

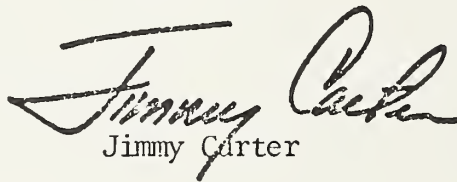
Mr. Kenneth E. Grant
Administrator
United States Department of Agriculture
Soil Conservation Service
Washington, D. C. 20250

Dear Mr. Grant:

The work program and the draft Environmental Impact Statement relative to the Upper Mulberry River Watershed project have been reviewed by appropriate State Agencies per various Federal requirements. The results of that review are summarized in the accompanying Memorandum directed to you from the State Clearinghouse. As long as the recommendations in this Memorandum are carried out, I approve of the work program.

As I have in the past, I am asking that the State Clearinghouse be notified about the individual projects prior to actual development.

Sincerely,


Jimmy Carter

JC:bjb

SOIL CONSERVATION SVC.
WASH., D.C.

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Office of Planning and Budget
Executive Department

James T. McIntyre, Jr.
Director

STATE CLEARINGHOUSE MEMORANDUM

TO: Kenneth E. Grant
Administrator
United States Department of Agriculture
Soil Conservation Service

FROM: John Robins *JR*
Administrator
Georgia State Clearinghouse

DATE: January 12, 1973

REFERENCE: The Upper Mulberry River Watershed Project, Work Program
and Draft Environmental Impact Statement; Georgia State
Clearinghouse Control Number: 72-10-30-03

As required by Chapter 13, Watershed Protection Handbook, this Office has requested and received review comments from appropriate State Agencies. These can be summarized as follows:

The Earth and Water Division of the Georgia Department of Natural Resources does not anticipate geological problems in the site area.

The Game and Fish Division, also of the Georgia Department of Natural Resources, in its review of the Draft Environmental Impact Statement recommends:

(1) The clearing of banks be deleted and any snagging be selective (Refer to paragraph 2, page 3 Draft Environmental Impact Statement).

(2) Representatives of the Soil Conservation Service and the Game and Fish Division of the Department of Natural Resources cooperatively select the logs and debris to be removed.

(3) The stream bank protection measures as described on page 8, Draft Environmental Impact Statement, be held in abeyance for two or three years after the selective snagging has been done to determine if the proposed 85,675 feet of stream bank protection measures are needed. If the need is demonstrated, ameliorative measures could then be taken. Additionally, the recommendation is made that there be participation by both agencies in selecting the methods by which the stream bank protection measures are conducted.

(CONT)

MEMORANDUM

January 12, 1973

Page 2

The Game and Fish Division is pleased the Soil Conservation Service has eliminated all previously planned channel excavation in this project.

The Planning Division of the Office of Planning and Budget feels it is important to make adequate provisions for sewage treatment a project objective along with the provision of municipal water supplies. This Planning Division finds sewage treatment is not mentioned in the Draft Environmental Impact Statement as a necessary complement to water supply.

The Georgia Department of Transportation's review made the following points:

The Department has reviewed the Draft Environmental Statement thoroughly, and it has been determined that the only reservoir site in conflict with any road on the State or Federal-Aid System is at site no.18 in Hall County. The proposed reservoir at site no.18 will require roadway reconstruction at two locations on FAS Rt. 997.

The crossing of S-997 at Lollis Creek will require raising the existing roadway approximately seven feet in order to hold to the five feet required above the maximum pool elevation of 876 feet. Also, a Triple 10' x 12' Concrete Box Culvert in place will need to be extended approximately two feet at each end with new wingwalls and parapets to be constructed. Stone Dump Rip Rap should also be placed on the approach embankments to two feet above maximum pool elevation for erosion protection.

The crossing of S-997 at Sherwood Creek will require raising the existing roadway about 14 feet to hold to the five feet above maximum pool elevation of 876 feet. The Triple 10' x 10' Concrete Box Culvert in place will need to be extended about 21 feet at each end with new wingwalls and parapets to be constructed. Stone Dump Rip Rap should also be placed on the approach embankments up to two feet above maximum pool elevation for erosion protection.

Improvements to this section of FAS 997 from just south of Lollis Creek, extending south to the Gwinnett County Line were made under Project No.S-0997(6) Hall County and let to contract in 1968. These old plans were reviewed in determining the extent of reconstruction required.

On page 22 of the Watershed Work Plan Report, it is stated that Hall County will be responsible for any road modifications necessary for the installation of structure no.18. It is recommended that the modifications at the above two locations on FAS 997 be performed in accordance with Georgia Department of Transportation-Highway Division Standards and Specifications and under the supervision of the Georgia Department of Transportation.

On November 20, 1972, Ralph G. Holland, District Locating Engineer, Gainesville, Georgia, met with Mr. Howard Seals, Hall County Administrator, and Mr. Howard Pollard, joint Hall County and Gainesville Planning Engineer, to advise them of the extent of reconstruction involved of FAS Rt. 997 at site no.18.

Prior to actual development, the State Clearinghouse should be notified about the individual projects which will implement this work program. State Clearinghouse Control Number 72-10-30-03 may be used for such referral on these projects.

Attachments: (5)

Earth and Water Division, Department of Natural Resources
Game and Fish Division, Department of Natural Resources
Planning Division, Office of Planning and Budget
Georgia Forest Research Council
Planning and Programming Division, Department of Transportation

TO: State Clearinghouse
Office of Planning and Budget
270 Washington Street, S. W.
Atlanta, Georgia 30334

FROM: Name: Richard C Jones
Title: Geologists
Agency: Earth and Water
Division: Dept of Natural Resources

SUBJECT: RESULTS OF REVIEW OF NOTIFICATION OF INTENT TO APPLY
FOR FEDERAL ASSISTANCE

Applicant: Upper Chatt. River Soil & Water Conserv. Dist.

Project: Upper Mulberry River

State Clearinghouse Control Number: 72-10-30-03

DATE:

This proposal does not fall within the scope of interest of
this organization. _____

This proposal is considered to be consistent with those State
goals, policies, objectives, plans, programs and fiscal resources
with which this organization is concerned. _____

The following comments are respectfully offered concerning this
proposal: (Please type)

From the given information we anticipate
no geologic problems in the site area.



Department of Natural Resources

GAME AND FISH DIVISION

270 Washington Street, S.W.
Atlanta, Georgia 30334

Joe N. Tanner
COMMISSIONER

Jack Crockford
DIVISION DIRECTOR

November 28, 1972

Mr. John Robins
State Clearinghouse
Office of Planning and Budget
270 Washington Street, S.W.
Atlanta, Georgia 30334

RECEIVED

DEC 1 1972

Dear John:

OFFICE OF PLANNING
AND BUDGET

Personnel from the Game and Fish Division of the Department of Natural Resources have reviewed the Draft Environmental Impact Statement for the Upper Mulberry River Watershed Project (72-10-30-03) and would like to make the following comments.

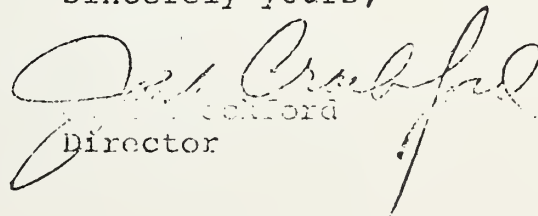
The second paragraph on page 3 states that approximately 8,700 feet of clearing and snagging is proposed. We would like to recommend that the clearing of banks be deleted and that the snagging be selective. We would also like to recommend that representatives from the Soil Conservation Service and this agency cooperatively select the logs and other debris to be removed.

On page 8, 85,675 feet of stream bank protection measures are proposed in this project. We recommend that the Soil Conservation Service wait two or three years after the selective snagging has been done to determine if these stabilization measures are needed. If they are needed, they may be done at this time. We would like representatives from both agencies to participate in selecting the methods by which the stream bank protection measures are conducted.

This agency is pleased that the Soil Conservation Service has eliminated all previously planned channel excavation in this project.

Please contact me if you have need for additional information.

Sincerely yours,


Jack Crockford
Director

JC:er

cc: Claude Hastings
John Hester



Executive Department
Office of Planning and Budget

270 Washington St., S. W.
Atlanta, Georgia 30334

TO: STATE CLEARINGHOUSE
Office of Planning and Budget
270 Washington Street, S.W.
Atlanta, Georgia 30334

FROM: Name: James B. Williams
Title: Physical Development Program Coordinator
Division: Planning
Agency: Office of Planning and Budget

SUBJECT: REVIEW COMMENTS: DRAFT ENVIRONMENTAL IMPACT
STATEMENT

Submitting Agency: Upper Chattahoochee Soil & Water
Conservation District
Project Involved: Upper Mulberry Watershed Project
State Clearinghouse Control Number: 72-10-30-03'

This draft environmental impact statement does not fall within the scope of interest of this organization.

This organization has reviewed the draft environmental impact statement and agrees with the conclusions presented therein.

X

The following comments are respectfully offered regarding this draft environmental impact statement. (Please type; use additional sheet if necessary)

The Planning Division feels that it is important to make adequate provision for sewage treatment a project objective along with the provision of municipal water supplies. Sewage treatment is not mentioned in the Statement as a necessary complement to water suppl



Executive Department
Office of Planning and Budget

270 Washington St., S.W.
Atlanta, Georgia 30334

TO: STATE CLEARINGHOUSE
Office of Planning and Budget
270 Washington Street, S.W.
Atlanta, Georgia 30334

FROM: Name: H. E. Ruark
Title: Director
Division: NA
Agency: Georgia Forest Research Council

SUBJECT: REVIEW COMMENTS: DRAFT ENVIRONMENTAL IMPACT
STATEMENT

Submitting Agency: Upper Chattahoochee River Soil & Water
Conservation District
Project Involved: The Upper Mulberry River, Watershed Project, Georgia
Draft Environmental Impact Statement
State Clearinghouse Control Number: 72-10-30-03

This draft environmental impact statement does not fall within the scope of interest of this organization.

XX

This organization has reviewed the draft environmental impact statement and agrees with the conclusions presented therein.

The following comments are respectfully offered regarding this draft environmental impact statement. (Please type; use additional sheet if necessary)

RECEIVED

NOV 21 1972

OFFICE OF PLANNING
AND BUDGET



Executive Department
Office of Planning and Budget

270 Washington St., S. M.
Atlanta, Georgia 30334

TO: STATE CLEARINGHOUSE
Office of Planning and Budget
270 Washington Street, S.W.
Atlanta, Georgia 30334

FROM: Name: Jere A. Burruss
Title: Assistant State Transportation Planning Engineer
Division: Planning and Programming
Agency: Department of Transportation

SUBJECT: REVIEW COMMENTS: DRAFT ENVIRONMENTAL IMPACT
STATEMENT

Submitting Agency: Upper Chattahoochee River Soil and Water
Conservation District

Project Involved: The Upper Mulberry River, Watershed Project, Ga.,
Draft Environmental Impact Statement

State Clearinghouse Control Number: 72-10-30-03

This draft environmental impact statement does not fall within the scope of interest of this organization.

This organization has reviewed the draft environmental impact statement and agrees with the conclusions presented therein.

X

The following comments are respectfully offered regarding this draft environmental impact statement. (Please type; use additional sheet if necessary)

See attached sheet.

H. Darrell Eiwell
for
Jere A. Burruss

This office has reviewed the Draft Environmental Statement thoroughly, and it has been determined that the only reservoir site in conflict with any road on the State or Federal-Aid System is at site no. 18 in Hall County. The proposed reservoir at site no. 13 will require roadway reconstruction at two locations on FAS Rt. 997.

The crossing of S-997 at Lollis Creek will require raising the existing roadway approximately seven feet in order to hold to the five feet required above the maximum pool elevation of 876 feet. Also, a Triple 10' x 12' Concrete Box Culvert in place will need to be extended approximately two feet at each end with new wingwalls and parapets to be constructed. Stone Dump Rip Rap should also be placed on the approach embankments to two feet above maximum pool elevation for erosion protection.

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Improvements to this section of FAS 997 from just south of Lollis Creek, extending south to the Gwinnett County Line were made under Project No. S-0997 (6), Hall County and let to contract in 1968. These old plans were reviewed in determining the extent of reconstruction required.

On page 22 of the Watershed Work Plan Report, it states that Hall County will be responsible for any road modifications necessary for the installation of structure no. 18. It is recommended that the modifications at the above two locations on FAS 997 be performed in accordance with Georgia Department of Transportation - Highway Division Standards and Specifications and under the supervision of the Georgia Department of Transportation.

On November 20, 1972, Ralph G. Holland, District Locating Engineer, Gainesville, Georgia, met with Mr. Howard Sears, Hall County Administrator, and Mr. Howard Pollard, joint Hall County and Gainesville Planning Engineer, to advise them of the extent of reconstruction involved on FAS Rt. 997 at site no. 18.

Date December 7, 1972

Mr. Kenneth E. Grant
Administrator
U. S. Dept. of Agriculture
Soil Conservation Service
Washington D. C. 20250

FROM: Name: Dr. Sam F. Dayton
Title: Executive Director
Regional Clearinghouse: Georgia Mountains APDC

SUBJECT: PROJECT NOTIFICATION AND REVIEW
Applicant: Upper Chattahoochee River Soil and Water
Conservation District
Project: The Upper Mulberry River, Watershed Project, Georgia
State Clearinghouse Control Number: 72-10-30-03
Regional Clearinghouse Staff Contact: Rob Ware

The Regional Clearinghouse has reviewed the Summary Notification for the above project.

As a result of the review it has been determined that the proposed project is in accord with regional and local plans, programs and objectives as of this date. You should now complete and file your formal application with the appropriate Federal agency(s). A copy of this form must be attached to your application.

If you have any questions, please contact the clearinghouse staff member named above, who will be pleased to assist you.

Comment:

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SOIL CONSERVATION SVC.
WASH., D.C.

Copy to State Clearinghouse

January 8, 1973

MEMO TO: Mr. Charles W. Bartlett
State Conservationist

FROM: Dan E. Sweat, Jr. *DES*
Executive Director

SUBJECT: ARC Review
Submitting Agency: U. S. Department of Agriculture
Soil Conservation Service

Report: Upper Mulberry River Watershed
Draft Environmental Statement

Reference is made to my memo to you dated November 9, 1972, acknowledging receipt of your request for ARC's review and comments on the cited report. At this time, ARC has no comment on the Draft Environmental Statement.

Thank you for the opportunity to review and please feel free to contact me or Schild Grant of my staff if there are any questions or comments regarding this matter.

cc: Honorable William Atkinson
State Clearinghouse





